

Firstbeat Uploader

Technical Manual -version 1.0.0.0

Table of contents:

1	TECHNICAL MANUAL.....	3
1.1	SOFTWARE FEATURES	3
1.2	MINIMUM SYSTEM REQUIREMENTS	3
1.3	USING FIRSTBEAT UPLOADER	3
1.3.1	Logging in.....	3
1.3.2	Uploading data with Suunto Memory Belt.....	6
1.3.3	Uploading data with Omron Pedometer HJ-720	8
1.3.4	Options dialog	10
1.3.5	Suunto Memory Belt Config Tool.....	12

1 TECHNICAL MANUAL

1.1 Software features

Firstbeat Uploader is software for PC computers developed and owned by Firstbeat Technologies Ltd. It used for reading information related to bodily functions from external devices. The information is uploaded to a server.

1.2 Minimum system requirements

- Compatible with Windows 2000, Windows XP and Windows Vista.
- (Windows ME and 98 are not tested)
- 512MB of RAM.
- 1GHz CPU
- Screen resolution at 1024x768 and 16-bit colours.
- Hard disk drive free space 50MB.
- Adobe Acrobat Reader 5.0 or later.
- Compatible measurement devices:
 - Suunto Memory Belt
 - Suunto Smart Belt
 - Omron Pedometer HJ-720

1.3 Using Firstbeat Uploader

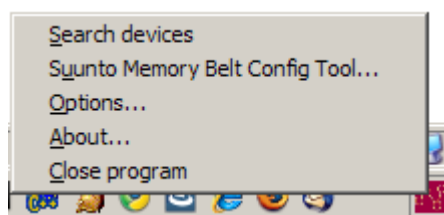
1.3.1 Logging in

When Firstbeat Uploader is started, it shows icon in the notification area of Windows taskbar as seen in Figure 1.



Figure 1, Firstbeat Uploader in notification area.

The programs functions are accessed from the main menu by right clicking the icon. The menu can be seen in Figure 2.



The main menu has following functions:

Function	Description
Search devices	Initiates upload operation for currently connected devices.
Suunto Memory Bemory Belt Config Tool	Opens the configuration tool for Suunto Memory Belt.
Options	Opens the Options dialog.
About	Shows About dialog with version information.
Close program	Closes the program.

Figure 2, the main menu.

When you select 'Search devices' from the main menu or double click the icon the program searches for supported devices. When a supported device is detected, you are asked for your credentials to begin the upload process. The login screen is shown in Figure 3.



Figure 3, login screen.

A valid username and password are to be entered in the login screen. Data can only be uploaded after valid credentials are given as they are used to identify the account to which the data is associated with.

If login is not successful, the screen shows information about the cause of the failure:

Message	Description
Invalid username or password!	You mistyped your username or password.
Your account has been closed. Please contact the support.	An administrator has closed your account for some reason. Contact the support about this issue.
Customer account has expired. Please contact the support.	The customer account, to which your account belongs to, has expired or is disabled. Contact the support about this issue.
Your account does not have personal information.	Your account needs to have all necessary personal parameters given before you can use Firstbeat Uploader. Login to the web service and complete the personal information.

After giving valid credentials the process of loading data from the device begins. See the following chapters for how to load from certain type of device.

1.3.2 Uploading data with Suunto Memory Belt

When data is being transferred from Suunto Memory Belt a progress dialog is shown. It can be seen in Figure 4.

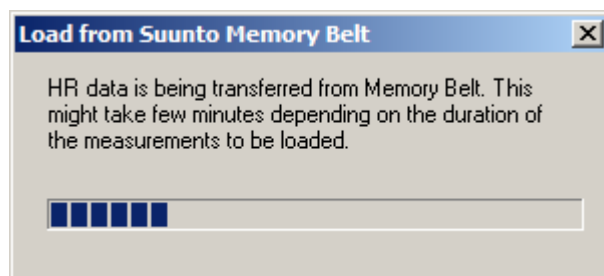


Figure 4, Suunto Memory Belt data loading progress dialog.

When data loading is complete, a dialog for selecting what to upload is shown as seen in Figure 5.

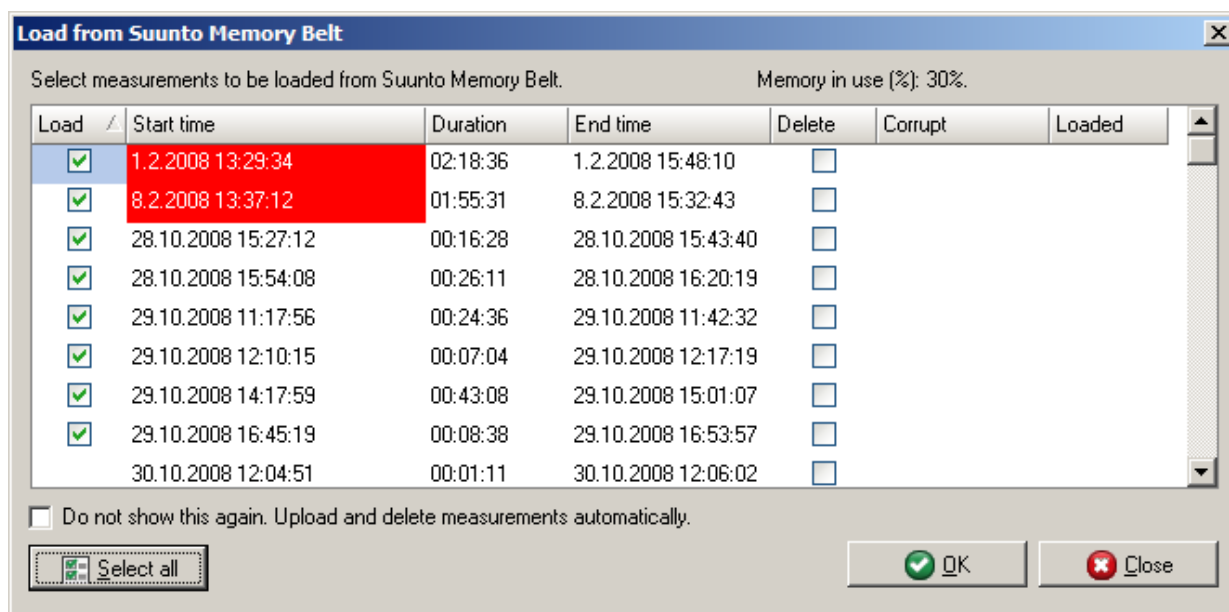


Figure 5, Suunto Memory Belt measurement selection screen .

In this dialog you can select which measurements you want to upload and which measurements to remove from the device. You can also edit start times of the measurements should the device had had incorrect recording time.

The dialog's table has following columns:

Column name	Description
Load	Check the box to have the measurement uploaded to the server.
Start time	Start time of the measurement.
Duration	Duration of the measurement.

End time	End time of the measurement.
Delete	Check the box to have the measurement removed from the device.
Corrupt	The measurement could not be loaded from the device. Either because of weak contact between the device and the docking station or the measurement has been corrupted in the device.
Loaded	An X here indicates that this particular measurement has already been uploaded to the server.

You may face a pair of warning dialogs when you are shown the measurement selection dialog. They can be seen in Figure 6 and Figure 7.

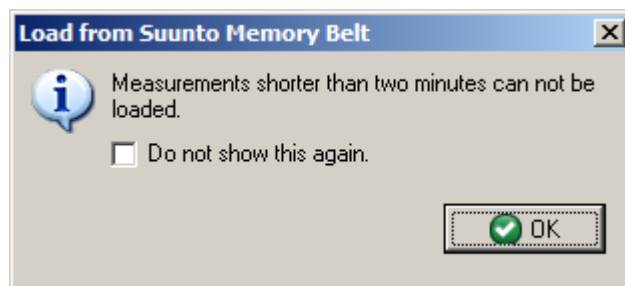


Figure 6, too short measurement warning.

Measurements shorter than two minutes are too short to contain any useful data and therefore can not be selected for loading.

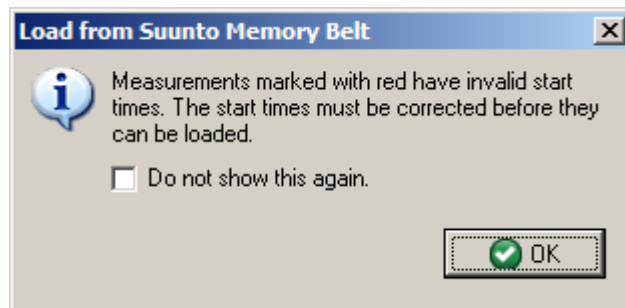


Figure 7, measurement start time warning.

Measurements older than one year or newer than one day are likely because of an incorrect clock time on the device. Such measurements can not be uploaded before their start times have been corrected. These measurements are also highlighted on the table with red color.

Editing a measurement's start time is done by double clicking the start time row of the measurement; this opens a date and time editor in the table as seen in Figure 8.

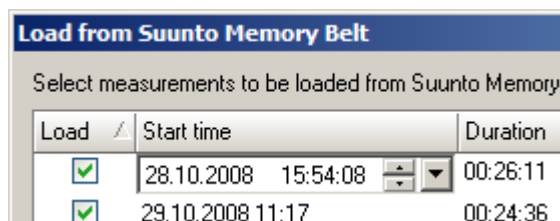


Figure 8, measurement start time editor.

The checkbox in the screen can be used to have the whole screen skipped next time. When this is selected, all measurements are automatically uploaded to the server and all logs are removed from the device without user interaction.

Having selected what to upload, press the OK button. This may open a question dialog about measurement merging. Some measurements may have been fragmented into several shorter ones. Measurement merging merges such measurements into a whole one. The question dialog can be seen in Figure 9.

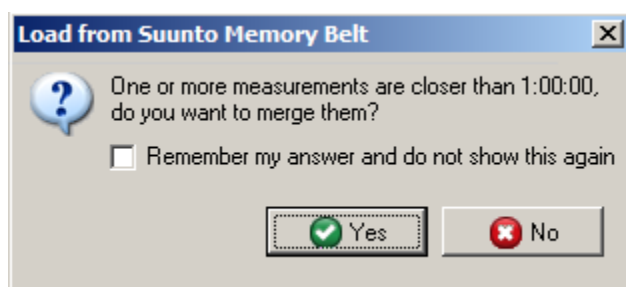


Figure 9, measurement merging question.

The checkbox in the dialog can be used to have the merging done automatically in the future, or not done at all.

Finally a progress dialog for the data uploading is shown as seen in Figure 10.

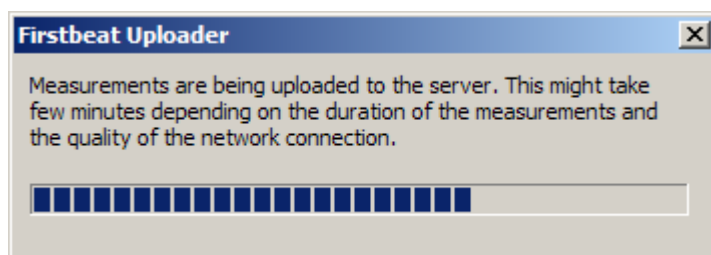


Figure 10, measurement upload progress dialog.

After the upload has been successfully completed, the selected measurements are removed from the device and the program returns to the initial state.

1.3.3 Uploading data with Omron Pedometer HJ-720

After data transwith Omron device is completed, a selection dialog is shown as seen in Figure 11.

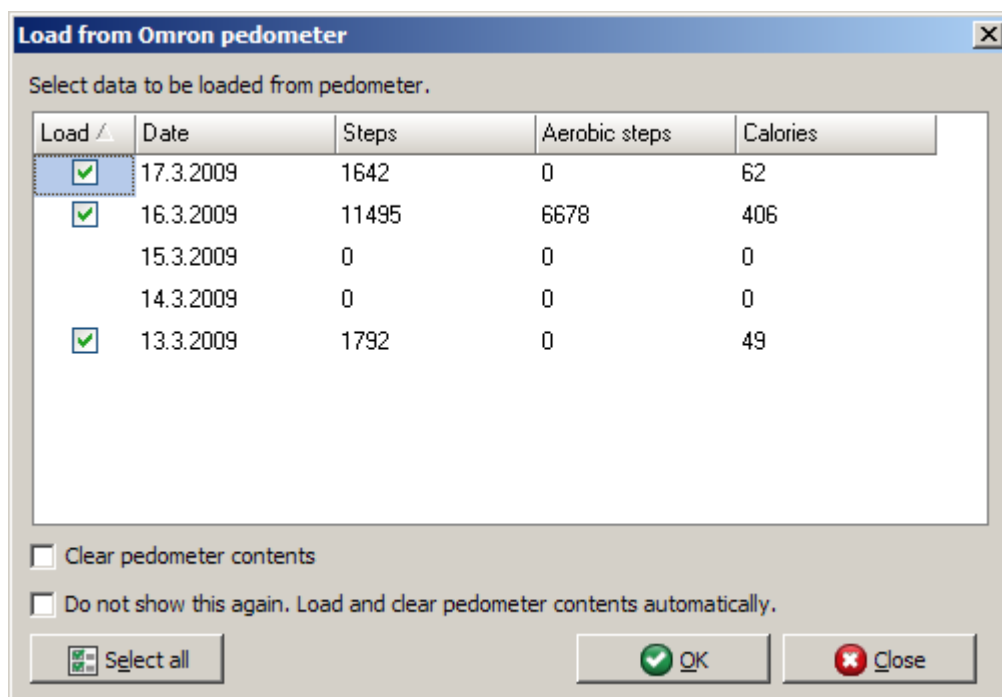


Figure 11, Omron device loading screen.

In this dialog you can select which day's steps you want to upload.

If you want to clear the pedometer's memory, select the option 'Clear pedometer contents'.

You can select not to see this dialog in the future and have all days' step data uploaded automatically followed by clearing of the pedometer's memory. This is select by checking the lower checkbox.

The dialog's table has following columns:

Column name	Description
Load	Check the box to have the day's step data uploaded to the server.
Date	Date of the day.
Steps	Amount of steps recorded during the day.
Aerobic steps	Amount of aerobic steps recorded during the day.
Calories	Amount of energy in kcal consumed.

Having selected what to upload, press the OK button. You will see a message in the notification area once the upload is complete.

1.3.4 Options dialog

Options dialog is used to configure the functionality of the program. The general tab contains options related to overall functionality it can be seen in Figure 12.

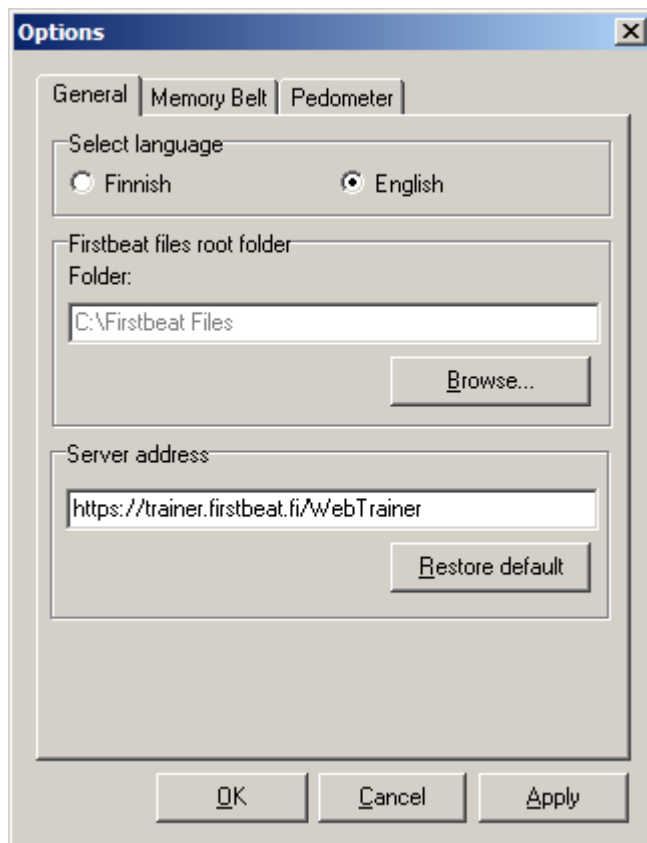


Figure 12, general tab of options.

The tab offers following options:

Option	Description
Language	Changes the language of the user interface across the program.
Firstbeat files folder	Changes the location of the folder containing measurement backup files.
Server address	Changes the address of the server to which the program connects.

The Memory Belt tab contains options related to Suunto Memory Belt as shown in Figure 13.

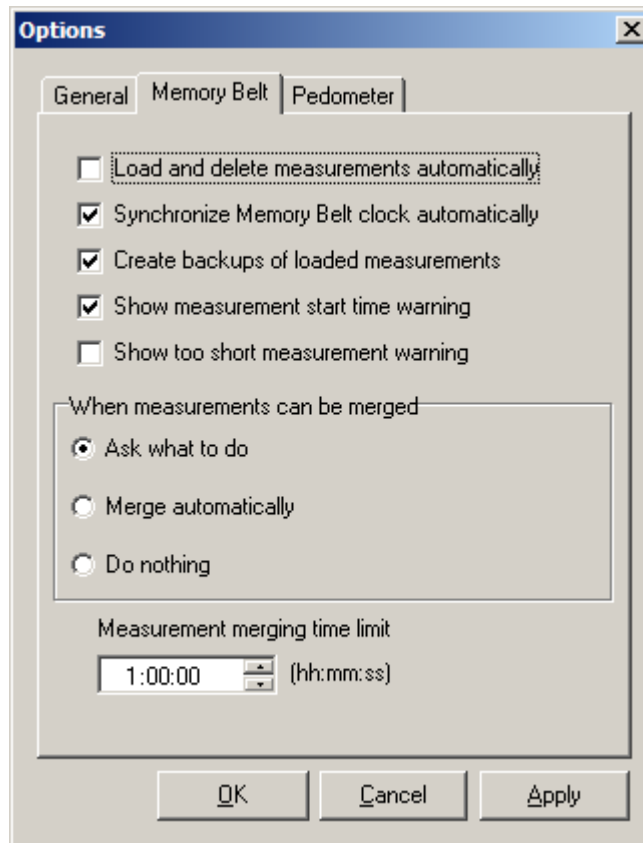


Figure 13, Memory Belt tab of options.

The tab offers following options:

Option	Description
Load and delete measurements automatically	Toggles if measurement loading and deleting is performed without user interaction.
Synchronize Memory Belt clock automatically	Toggles if Memory Belt's time is synced every time it is connected.
Create backups of loaded measurements	Toggles if backup files are created of all measurements uploaded to the server. They are placed under the Firstbeat Files folder.
Show measurement start time warning	Toggles if warning of measurement start times is shown.
Show too short measurement warning	Toggles if warning of too short measurements is shown.
Measurement merging	Controls what is done when measurements matching the merging interval are detected.
Measurement merging time	Determines maximum period of time between

interval	measurements' to be applicable for merging.
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The pedometer tab contains options related to Omron pedometer as shown in

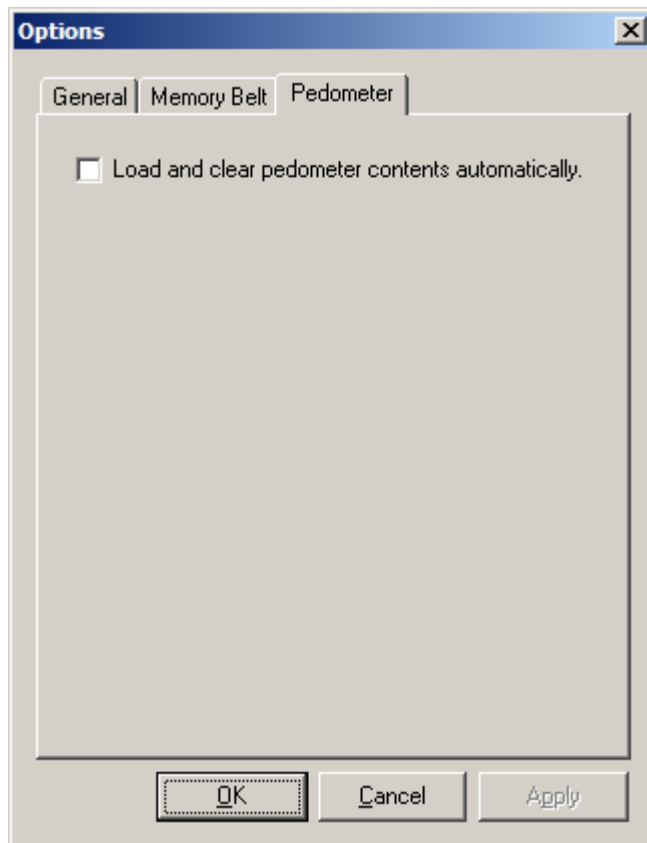


Figure 14, Pedometer tab of options.

The tab offers following options:

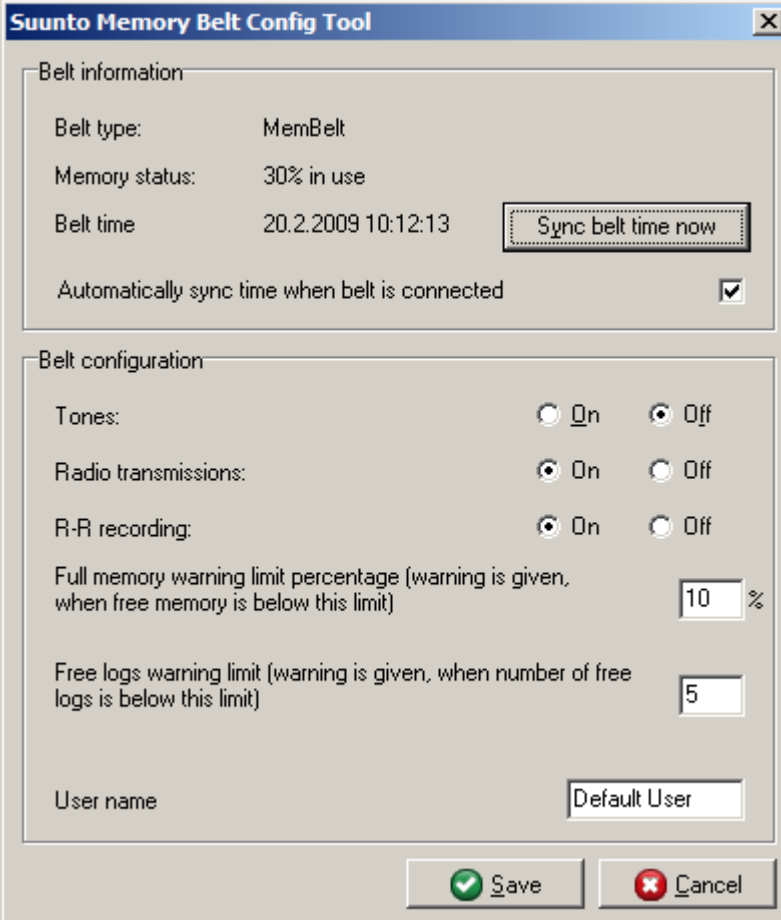
Option	Description
Load and clear pedometer contents automatically.	Toggles if step data loading and deleting is performed without user interaction.

1.3.5 Suunto Memory Belt Config Tool

The Suunto Memory Belt Config Tool offers means to configure the Suunto Smart Belt. Following options can be configured:

- Synchronizing belt internal clock
- Turning belt tones on/off
- Turning radio transmission on/off (turning the radio transmission off saves the battery)
- Memory full warning limit percentage (warning is given, when free memory is below this limit)
- Number of free logs low warning limit (warning is given, when number of free logs is below this limit)

- Identifier string for the belt



The screenshot shows the 'Suunto Memory Belt Config Tool' window. It has a title bar with a close button. The window is divided into two main sections: 'Belt information' and 'Belt configuration'. In the 'Belt information' section, there are labels for 'Belt type:' (MemBelt), 'Memory status:' (30% in use), and 'Belt time' (20.2.2009 10:12:13). To the right of the belt time is a button labeled 'Sync belt time now'. Below these is a checkbox labeled 'Automatically sync time when belt is connected' which is checked. The 'Belt configuration' section contains several settings: 'Tones:' with radio buttons for 'On' and 'Off' (Off is selected); 'Radio transmissions:' with radio buttons for 'On' and 'Off' (On is selected); 'R-R recording:' with radio buttons for 'On' and 'Off' (On is selected); 'Full memory warning limit percentage (warning is given, when free memory is below this limit)' with a text box containing '10' and a '%' symbol; 'Free logs warning limit (warning is given, when number of free logs is below this limit)' with a text box containing '5'; and 'User name' with a text box containing 'Default User'. At the bottom of the window are two buttons: 'Save' with a green checkmark icon and 'Cancel' with a red X icon.

Belt information	
Belt type:	MemBelt
Memory status:	30% in use
Belt time	20.2.2009 10:12:13
<input type="button" value="Sync belt time now"/>	
Automatically sync time when belt is connected	<input checked="" type="checkbox"/>

Belt configuration	
Tones:	<input type="radio"/> On <input checked="" type="radio"/> Off
Radio transmissions:	<input checked="" type="radio"/> On <input type="radio"/> Off
R-R recording:	<input checked="" type="radio"/> On <input type="radio"/> Off
Full memory warning limit percentage (warning is given, when free memory is below this limit)	<input type="text" value="10"/> %
Free logs warning limit (warning is given, when number of free logs is below this limit)	<input type="text" value="5"/>
User name	<input type="text" value="Default User"/>

Synchronize the belt's internal clock by pressing button 'Sync Smart Belt Time'.
Save the new configuration by pressing button 'Save' or close the tool with button 'Cancel'.